

205
COC #227

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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(541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: M107059 M107060

CLIENT: BRISTOL
REPORT TO: ANNE KRANAWETTER
ADDRESS: AMCHITKA, AK
PHONE: 907-770-0974 FAX: 770-0975
PROJECT NAME: 21090
PROJECT NUMBER: AMCHITKA
SAMPLED BY: 21090

INVOICE TO: BRISTOL
P.O. NUMBER: 21090

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses
10 7 5 4 3 2 1 <1

STD. Petroleum Hydrocarbon Analyses
5 4 3 2 1 <1

STD. Please Specify
OTHER

*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.																
2.	01AmlA02X 7/31/01 1325	X	X													
3.	01AmlA07SL 7/31/01 1335	X	X													
4.	01AmlA16SL 7/31/01 1345	X	X													
5.	01AmlA18SL 7/31/01 1420	X	X													
6.	01AmlA19SL 7/31/01 1400	X	X													
7.																
8.																
9.																
10.																
11.																
12.																
13.																
14.																
15.																

MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
S	2		
S	2		
S	2		
S	2		
S	2		

RELINQUISHED BY: Anne Kranawetter DATE: 7/31/01 RECEIVED BY: Matt Carnahan DATE: 7/31/01
PRINT NAME: Anne Kranawetter FIRM: BRISTOL TIME: 15:18 PRINT NAME: Matt Carnahan FIRM: NCA TIME: 15:18
RELINQUISHED BY: Anne Kranawetter DATE: 7/31/01 RECEIVED BY: Matt Carnahan DATE: 7/31/01
PRINT NAME: Anne Kranawetter FIRM: BRISTOL TIME: 15:18 PRINT NAME: Matt Carnahan FIRM: NCA TIME: 15:18



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7 December, 2001

Anne Kranawetter
Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are the results of analyses for samples received by the laboratory on 07/31/01 15:18. If you have any questions concerning this report, please feel free to contact me.

This report was recreated from a previously issued final report in order to provide an electronic copy. The final report used for these electronic copies may have been previously issued as an amended report due to client requested changes to sample names, etc. No data has changed since submission of the previously issued final, or amended, report.

Sincerely,

Stephen Wilson
Environmental Group Leader

Work Orders included in this report:

M107060



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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01AMLA02SL	M107060-01	Soil	07/31/01 13:25	07/31/01 15:18
01AMLA07SL	M107060-02	Soil	07/31/01 13:35	07/31/01 15:18
01AMLA16SL	M107060-03	Soil	07/31/01 13:45	07/31/01 15:18
01AMLA18SL	M107060-04	Soil	07/31/01 14:20	07/31/01 15:18
01AMLA19SL	M107060-05	Soil	07/31/01 14:00	07/31/01 15:18

C. O. C. # 205

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.
Environmental Laboratory Network

1 of 8



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Bristol Environmental & Engineering
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Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Polychlorinated Biphenyls per EPA Method 8082
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
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01AMLA02SL (M107060-01) Soil

Sampled: 07/31/01 Received: 07/31/01

Aroclor 1016	ND	149	ug/kg dry	1	EPA 8082	08/01/01	08/01/01	0108001	
Aroclor 1221	ND	298	"	"	"	"	"	"	
Aroclor 1232	ND	149	"	"	"	"	"	"	
Aroclor 1242	ND	149	"	"	"	"	"	"	
Aroclor 1248	ND	149	"	"	"	"	"	"	
Aroclor 1254	ND	149	"	"	"	"	"	"	
Aroclor 1260	ND	149	"	"	"	"	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	90.2 %	55-130							
Surr: Decachlorobiphenyl	80.3 %	55-130							

01AMLA07SL (M107060-02) Soil

Sampled: 07/31/01 Received: 07/31/01

Aroclor 1016	ND	148	ug/kg dry	1	EPA 8082	08/01/01	08/01/01	0108001	
Aroclor 1221	ND	297	"	"	"	"	"	"	
Aroclor 1232	ND	148	"	"	"	"	"	"	
Aroclor 1242	ND	148	"	"	"	"	"	"	
Aroclor 1248	ND	148	"	"	"	"	"	"	
Aroclor 1254	ND	148	"	"	"	"	"	"	
Aroclor 1260	ND	148	"	"	"	"	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	80.7 %	55-130							
Surr: Decachlorobiphenyl	69.9 %	55-130							

01AMLA16SL (M107060-03) Soil

Sampled: 07/31/01 Received: 07/31/01

Aroclor 1016	ND	149	ug/kg dry	1	EPA 8082	08/01/01	08/01/01	0108001	
Aroclor 1221	ND	297	"	"	"	"	"	"	
Aroclor 1232	ND	149	"	"	"	"	"	"	
Aroclor 1242	ND	149	"	"	"	"	"	"	
Aroclor 1248	ND	149	"	"	"	"	"	"	
Aroclor 1254	ND	149	"	"	"	"	"	"	
Aroclor 1260	ND	149	"	"	"	"	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	80.9 %	55-130							
Surr: Decachlorobiphenyl	74.4 %	55-130							

North Creek Analytical - Mobile Lab

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Environmental Laboratory Network

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Polychlorinated Biphenyls per EPA Method 8082

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
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01AMLA18SL (M107060-04) Soil

Sampled: 07/31/01 Received: 07/31/01

Aroclor 1016	ND	146	ug/kg dry	1	EPA 8082	08/01/01	08/01/01	0108001	
Aroclor 1221	ND	291	"	"	"	"	"	"	
Aroclor 1232	ND	146	"	"	"	"	"	"	
Aroclor 1242	ND	146	"	"	"	"	"	"	
Aroclor 1248	ND	146	"	"	"	"	"	"	
Aroclor 1254	ND	146	"	"	"	"	"	"	
Aroclor 1260	ND	146	"	"	"	"	"	"	

Surr: 2,4,5,6-Tetrachloro-m-xylene 88.0 % 55-130

Surr: Decachlorobiphenyl 76.2 % 55-130

01AMLA19SL (M107060-05) Soil

Sampled: 07/31/01 Received: 07/31/01

Aroclor 1016	ND	147	ug/kg dry	1	EPA 8082	08/01/01	08/01/01	0108001	
Aroclor 1221	ND	295	"	"	"	"	"	"	
Aroclor 1232	ND	147	"	"	"	"	"	"	
Aroclor 1242	ND	147	"	"	"	"	"	"	
Aroclor 1248	ND	147	"	"	"	"	"	"	
Aroclor 1254	ND	147	"	"	"	"	"	"	
Aroclor 1260	ND	147	"	"	"	"	"	"	

Surr: 2,4,5,6-Tetrachloro-m-xylene 84.2 % 55-130

Surr: Decachlorobiphenyl 81.6 % 55-130

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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North Creek Analytical, Inc.
Environmental Laboratory Network

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Total Metals per EPA 6000/7000 Series Methods
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMLA02SL (M107060-01) Soil					Sampled: 07/31/01 Received: 07/31/01				
Mercury	0.0178	0.00500	mg/kg dry	1	EPA 1631	08/05/01	08/08/01	0108015	
01AMLA07SL (M107060-02) Soil					Sampled: 07/31/01 Received: 07/31/01				
Mercury	ND	0.00500	mg/kg dry	1	EPA 1631	08/05/01	08/08/01	0108015	
01AMLA16SL (M107060-03) Soil					Sampled: 07/31/01 Received: 07/31/01				
Mercury	0.0114	0.00500	mg/kg dry	1	EPA 1631	08/05/01	08/08/01	0108015	
01AMLA18SL (M107060-04) Soil					Sampled: 07/31/01 Received: 07/31/01				
Mercury	0.00709	0.00454	mg/kg dry	1	EPA 1631	08/05/01	08/08/01	0108015	
01AMLA19SL (M107060-05) Soil					Sampled: 07/31/01 Received: 07/31/01				
Mercury	0.00591	0.00500	mg/kg dry	1	EPA 1631	08/05/01	08/08/01	0108015	

North Creek Analytical - Mobile Lab

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Physical Parameters per APHA/ASTM/EPA Methods
North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMLA02SL (M107060-01) Soil					Sampled: 07/31/01 Received: 07/31/01				
% Solids	76.2	0.0100 % by Weight		1	Gravimetric	08/01/01	08/02/01	0108002	
01AMLA07SL (M107060-02) Soil					Sampled: 07/31/01 Received: 07/31/01				
% Solids	74.8	0.0100 % by Weight		1	Gravimetric	08/01/01	08/02/01	0108002	
01AMLA16SL (M107060-03) Soil					Sampled: 07/31/01 Received: 07/31/01				
% Solids	75.1	0.0100 % by Weight		1	Gravimetric	08/01/01	08/02/01	0108002	
01AMLA18SL (M107060-04) Soil					Sampled: 07/31/01 Received: 07/31/01				
% Solids	74.0	0.0100 % by Weight		1	Gravimetric	08/01/01	08/02/01	0108002	
01AMLA19SL (M107060-05) Soil					Sampled: 07/31/01 Received: 07/31/01				
% Solids	75.1	0.0100 % by Weight		1	Gravimetric	08/01/01	08/02/01	0108002	

North Creek Analytical - Mobile Lab

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Bristol Environmental & Engineering
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Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Polychlorinated Biphenyls per EPA Method 8082 - Quality Control

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0108001 - 3545 ASE

Blank (0108001-BLK1)

Prepared & Analyzed: 08/01/01

Aroclor 1016	ND	150	ug/kg wet
Aroclor 1221	ND	301	"
Aroclor 1232	ND	150	"
Aroclor 1242	ND	150	"
Aroclor 1248	ND	150	"
Aroclor 1254	ND	150	"
Aroclor 1260	ND	150	"

Surr: 2,4,5,6-Tetrachloro-m-xylene	259	"	267	97.0	55-130
Surr: Decachlorobiphenyl	250	"	267	93.6	55-130

LCS (0108001-BS1)

Prepared & Analyzed: 08/01/01

Aroclor 1254	902	150 ug/kg wet	833	108	55-130
Surr: 2,4,5,6-Tetrachloro-m-xylene	267	"	267	100	55-130
Surr: Decachlorobiphenyl	248	"	267	92.9	55-130

Matrix Spike (0108001-MS1)

Source: M107060-01

Prepared & Analyzed: 08/01/01

Aroclor 1254	1170	167	ug/kg dry	1280	ND	88.9	55-130
<i>Surr: 2,4,5,6-Tetrachloro-m-xylene</i>	<i>321</i>		<i>"</i>	<i>410</i>		<i>78.3</i>	<i>55-130</i>
<i>Surr: Decachlorobiphenyl</i>	<i>313</i>		<i>"</i>	<i>410</i>		<i>76.3</i>	<i>55-130</i>

Matrix Spike Dup (0108001-MSD1)

Source: M107060-01

Prepared & Analyzed: 08/01/01

Aroclor 1254	1230	167	ug/kg dry	1280	ND	93.5	55-130	5.00	40
Surr: 2,4,5,6-Tetrachloro-m-xylene	370	"	409			90.5	55-130		
Surr: Decachlorobiphenyl	347	"	409			84.8	55-130		

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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Bristol Environmental & Engineering
2000 W International Airport C#1
Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Mobile Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0108015 - EPA 1631

Blank (0108015-BLK1)

Prepared: 08/05/01 Analyzed: 08/08/01

Mercury ND 0.00500 mg/kg wet

LCS (0108015-BS1)

Prepared: 08/05/01 Analyzed: 08/08/01

Mercury 0.0110 0.00500 mg/kg wet 0.0100 110 85-115

Duplicate (0108015-DUP1)

Source: M107057-01

Prepared: 08/05/01 Analyzed: 08/08/01

Q-06

Mercury 0.0138 0.00500 mg/kg dry 0.00716 63.4 20

Matrix Spike (0108015-MS1)

Source: M107057-01

Prepared: 08/05/01 Analyzed: 08/08/01

Q-01

Mercury 0.0269 0.00450 mg/kg dry 0.0120 0.00716 165 75-125

Matrix Spike (0108015-MS2)

Source: M107057-02

Prepared: 08/05/01 Analyzed: 08/08/01

Mercury 0.0233 0.00500 mg/kg dry 0.0127 0.00855 116 75-125

North Creek Analytical - Mobile Lab

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Project: Amchitka
Project Number: 21090
Project Manager: Anne Kranawetter

Reported:
08/14/01 10:34

Notes and Definitions

Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.

Q-02 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

Q-05 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.

Q-06 Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.

wet Sample results reported on a wet weight basis (as received)

RPD Relative Percent Difference

North Creek Analytical - Mobile Lab

Stephen Wilson, Environmental Group Leader

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North Creek Analytical, Inc.
Environmental Laboratory Network

8 of 8

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Report recreated from: \\sisters\elmnt\Report\M107060 FINAL 08 14 01 1034.mdb Default Report (not modified)
0107113-DUP1	Ag Total ICPMS 6020	Silver	Q-05
0107113-MS1	Ag Total ICPMS 6020	Silver	Q-02
0107113-MS1	Cd Total ICPMS 6020	Cadmium	Q-02
0107113-MS1	Cr Total ICPMS 6020	Chromium	Q-02
0107113-MS1	Pb Total ICPMS 6020	Lead	Q-02
0107113-MS1	Se Total ICPMS 6020		Q-02
0108015-DUP1	Hg Total CVAF 1631		Q-06
0108015-DUP1	Hg Total CVAF 1631	Mercury	Exceeds RPD limit
0108015-MS1	Hg Total CVAF 1631		Q-01
0108015-MS1	Hg Total CVAF 1631	Mercury	Exceeds upper control limit